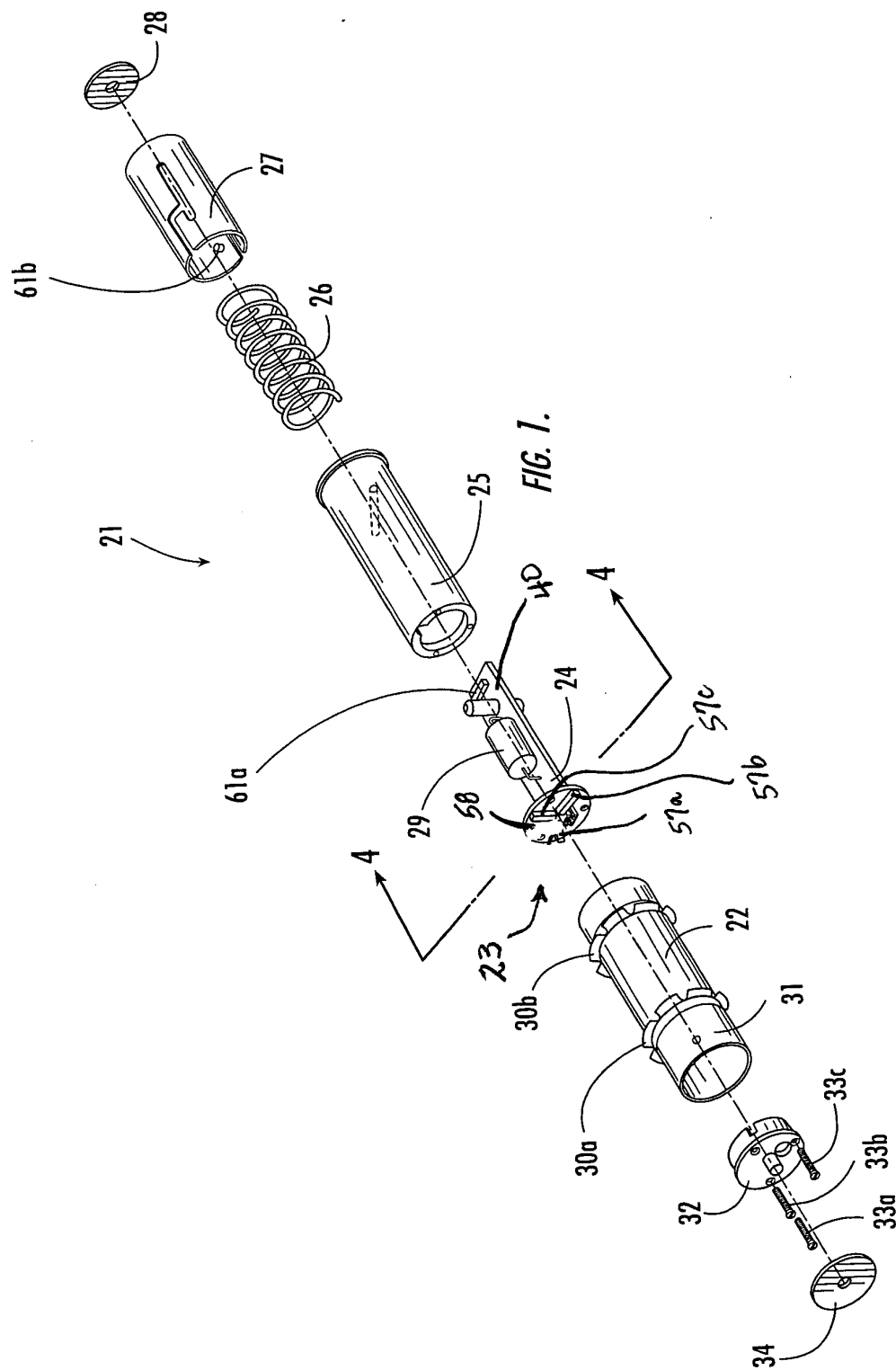


FIG. 1



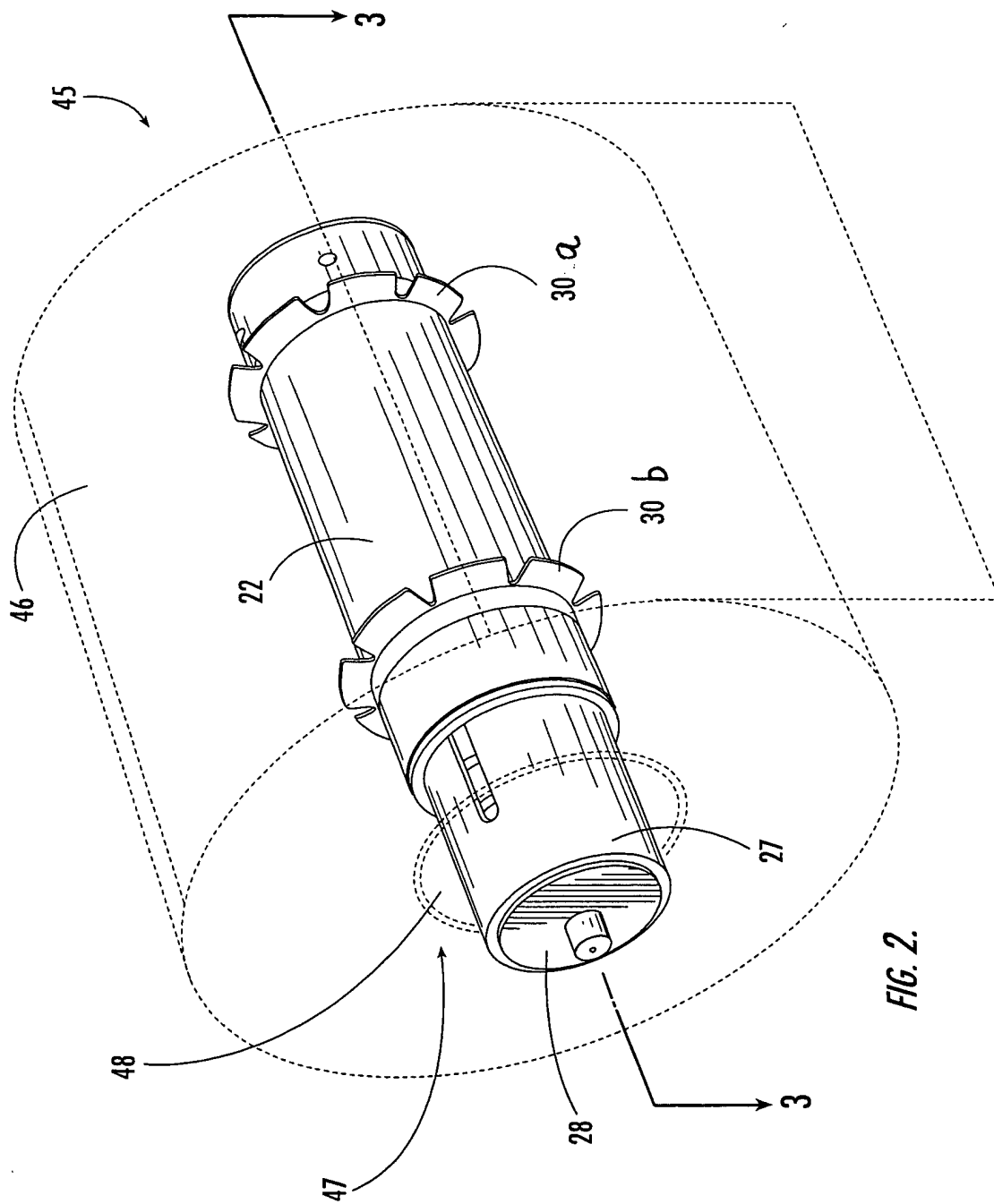
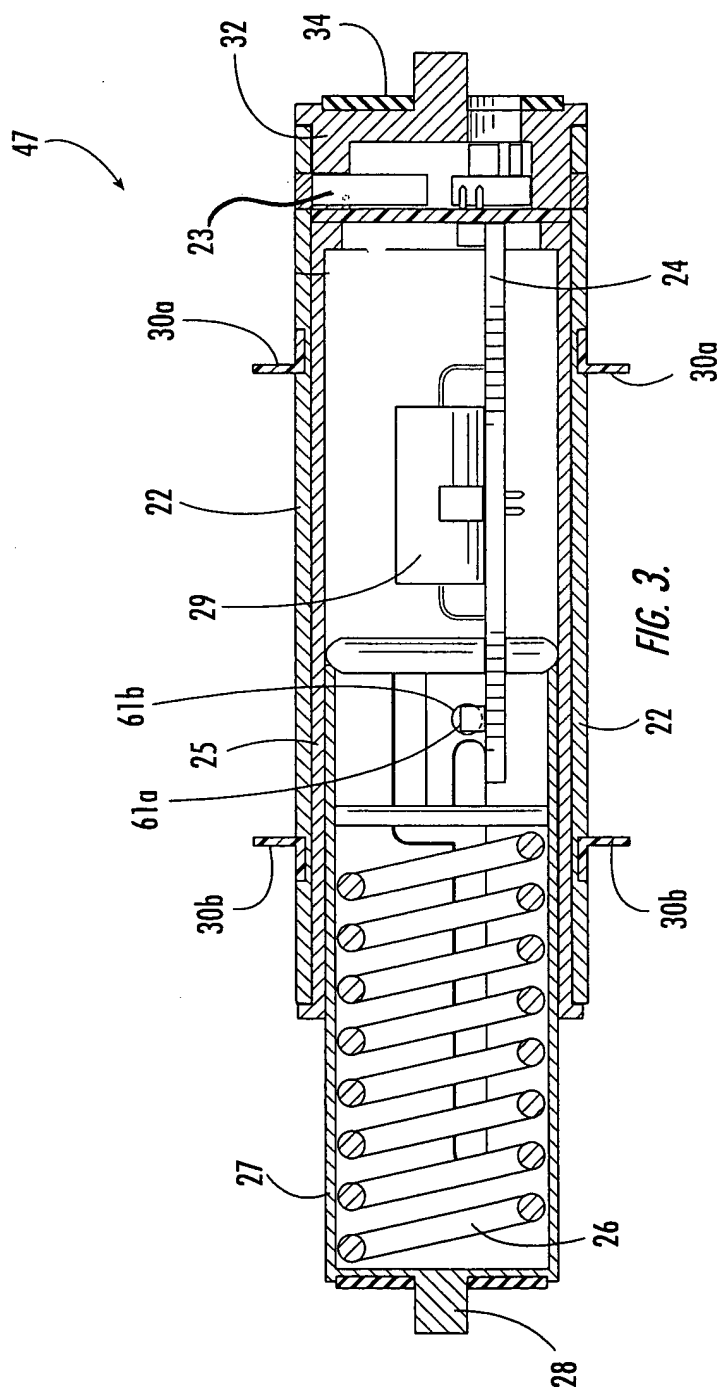
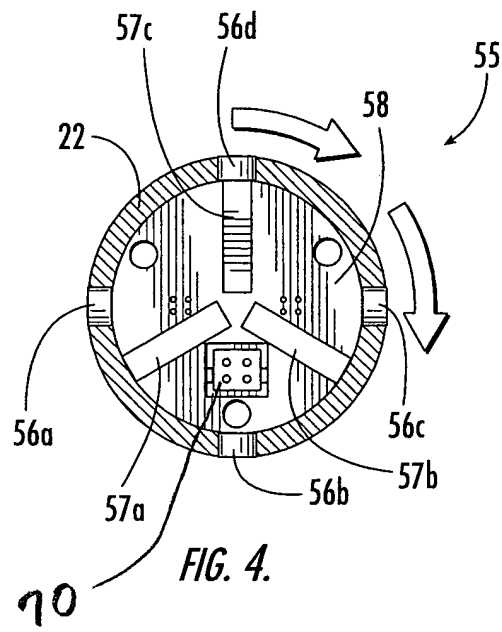


FIG. 2.

2000-2001





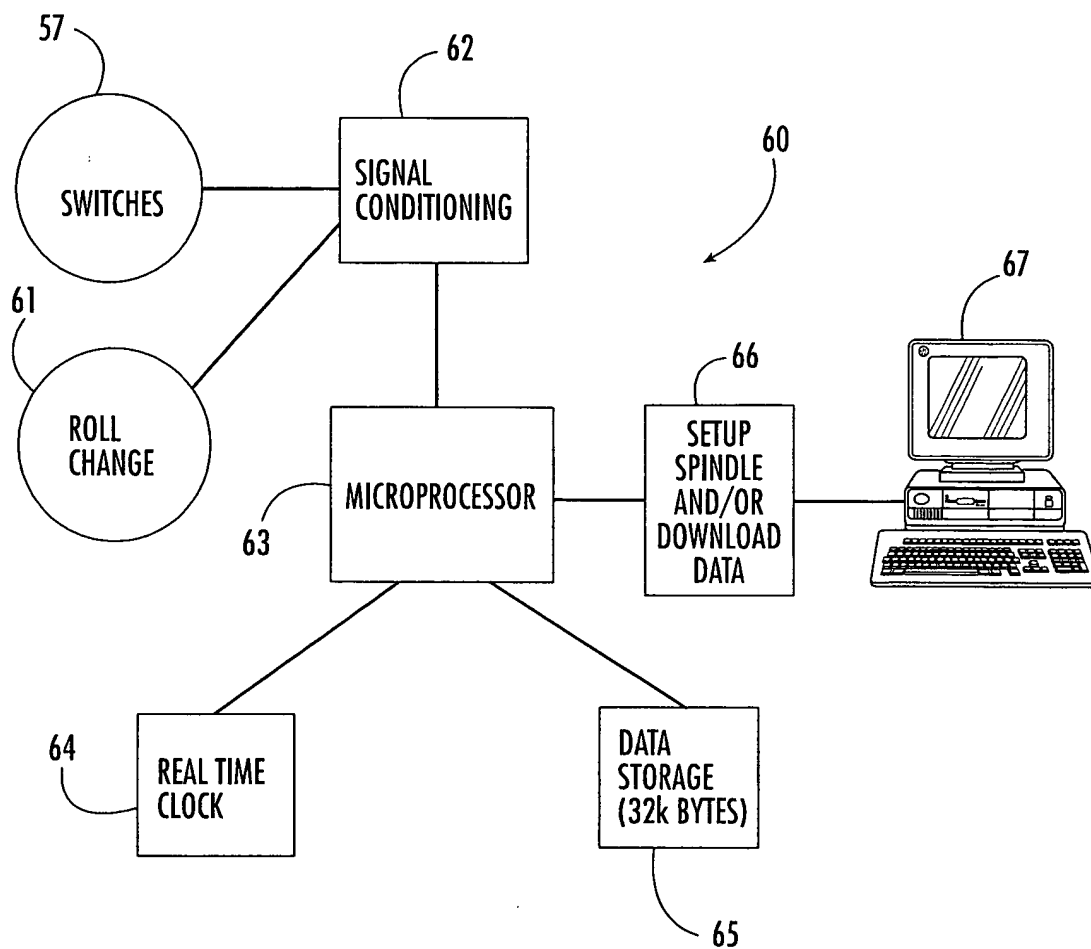


FIG. 5.

FIG. 6A

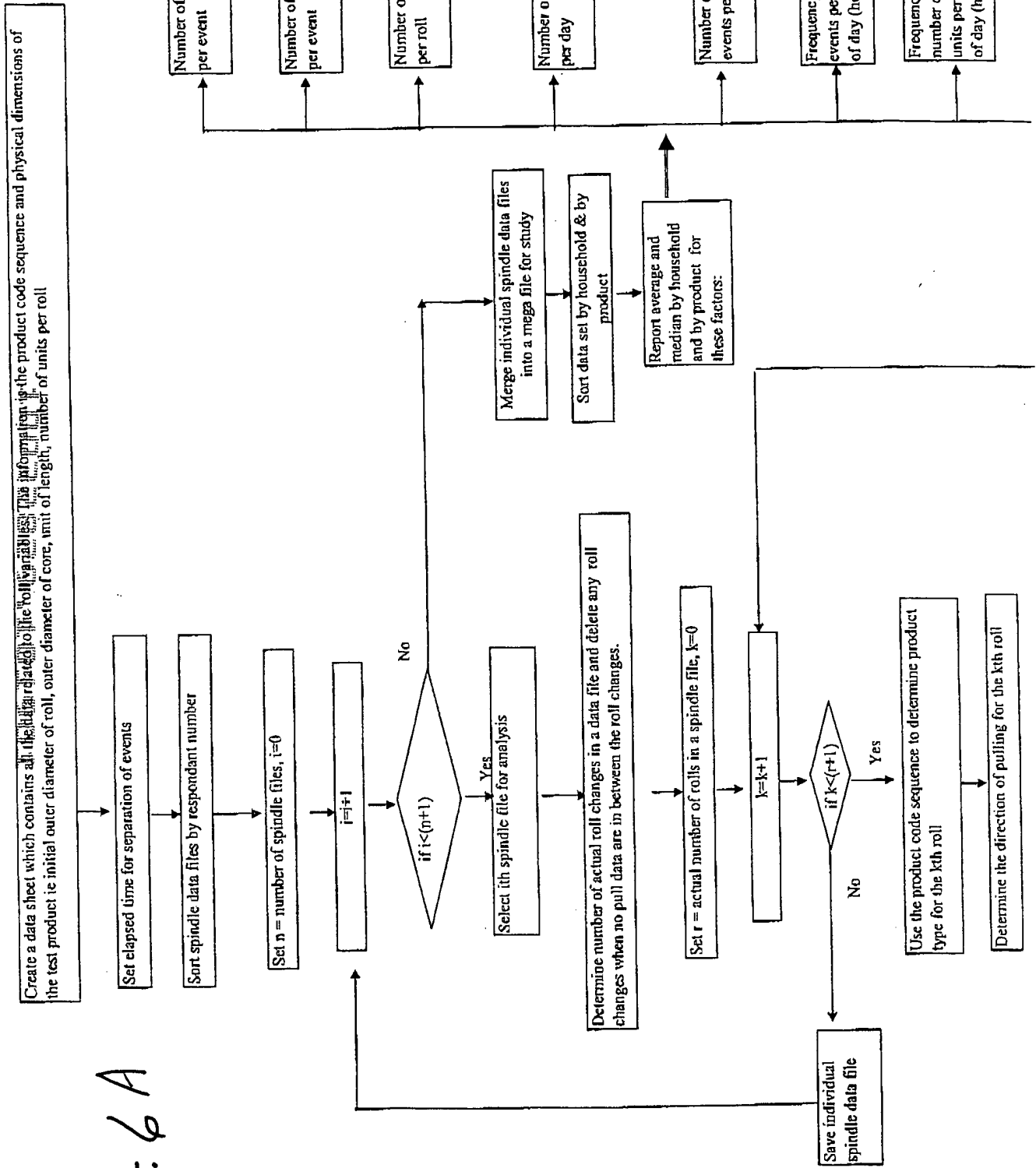
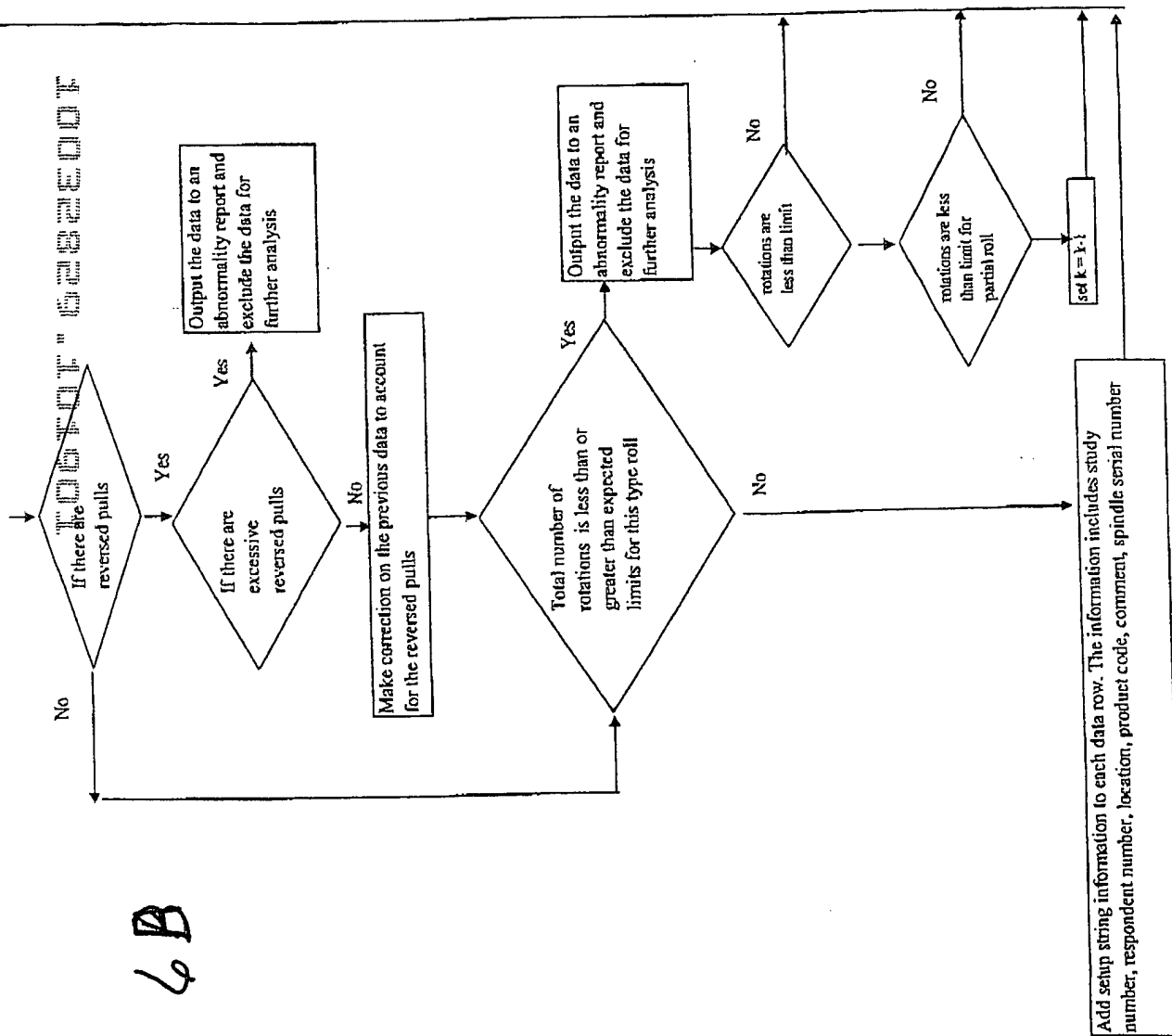
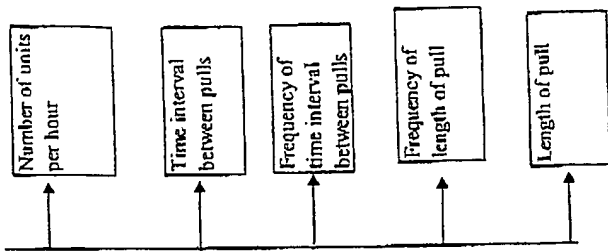


FIG. 6B



Use of Smart Spindle for toilet paper utility in Consumer Home

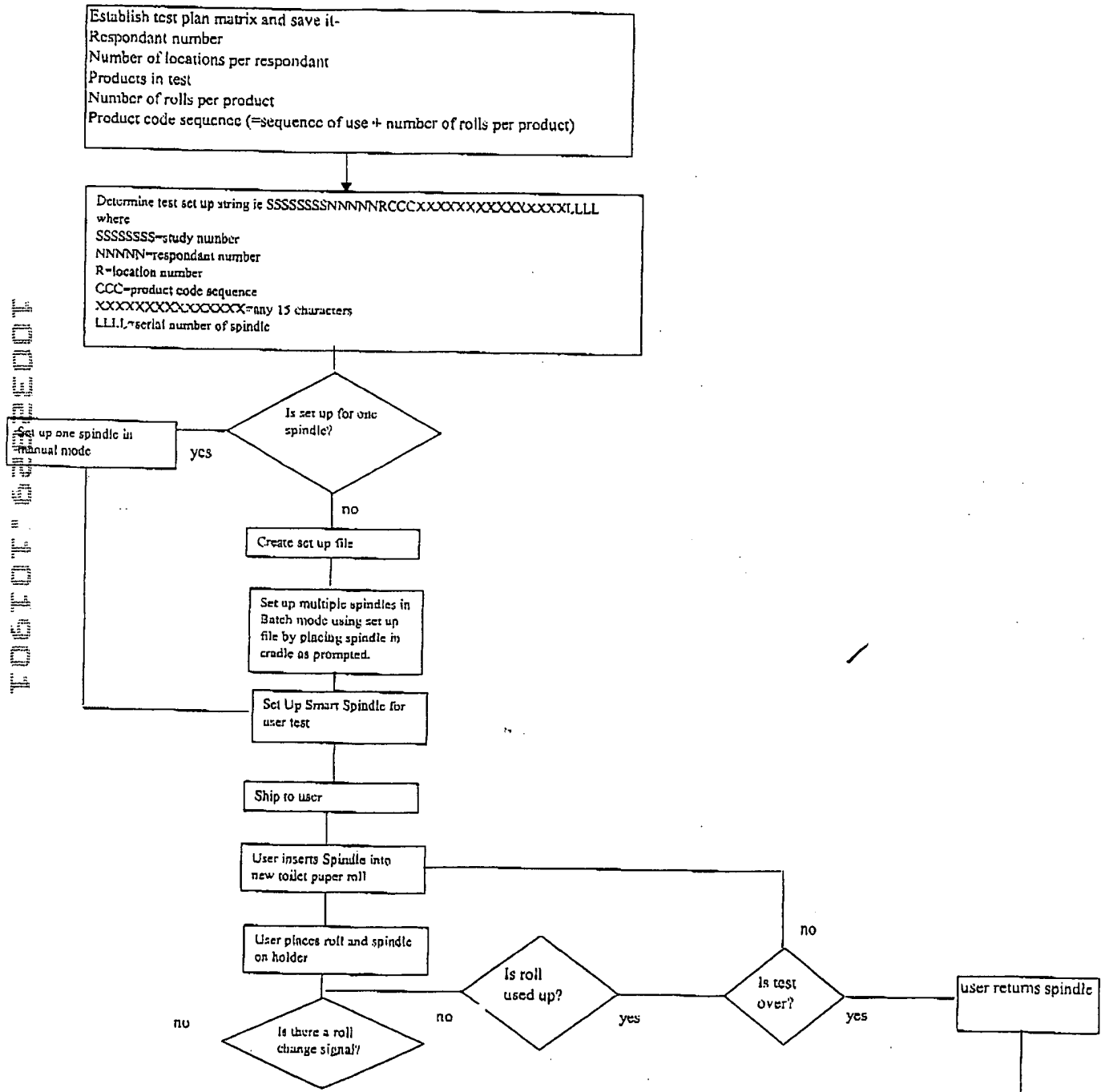


FIG 7A

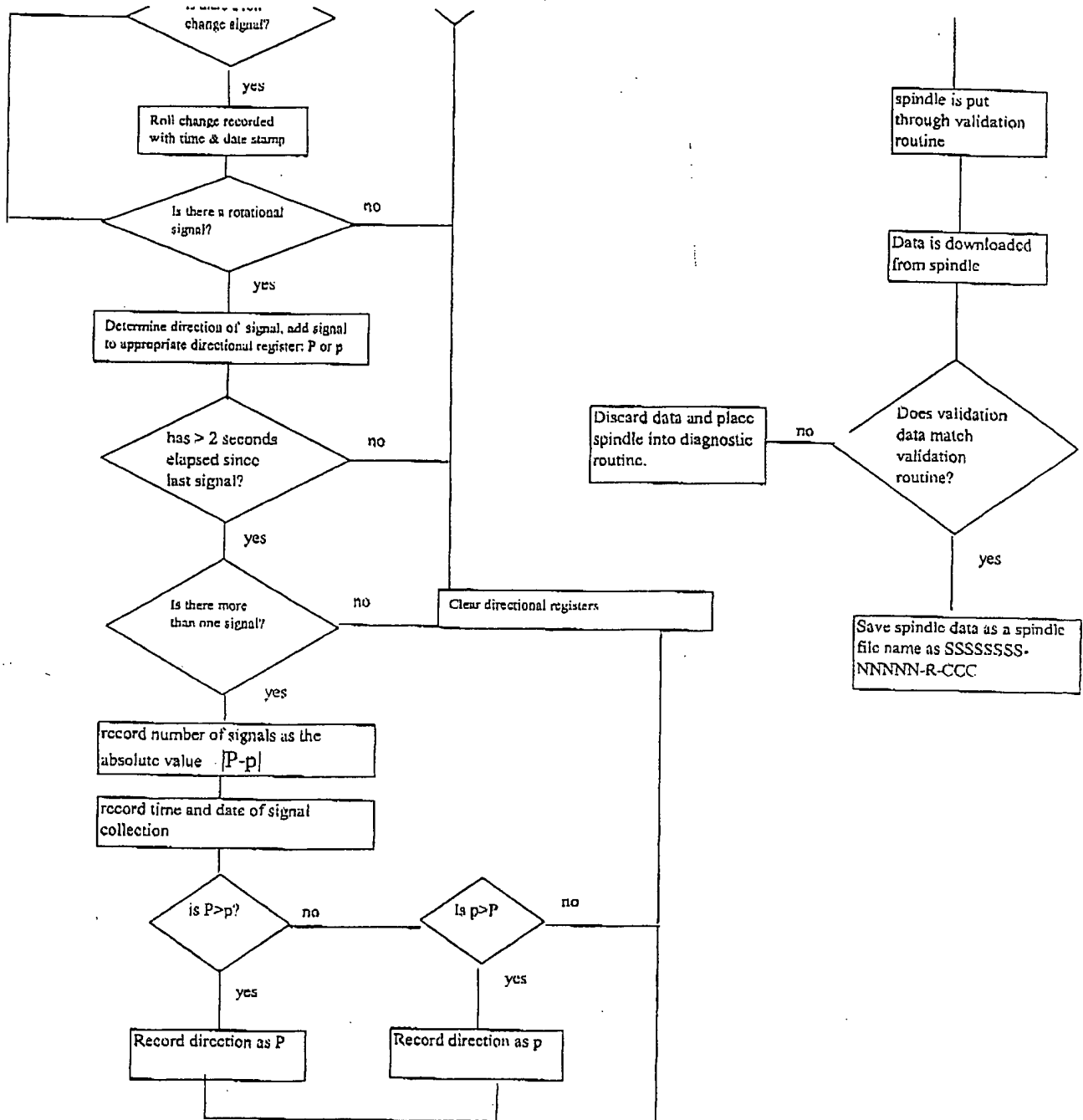
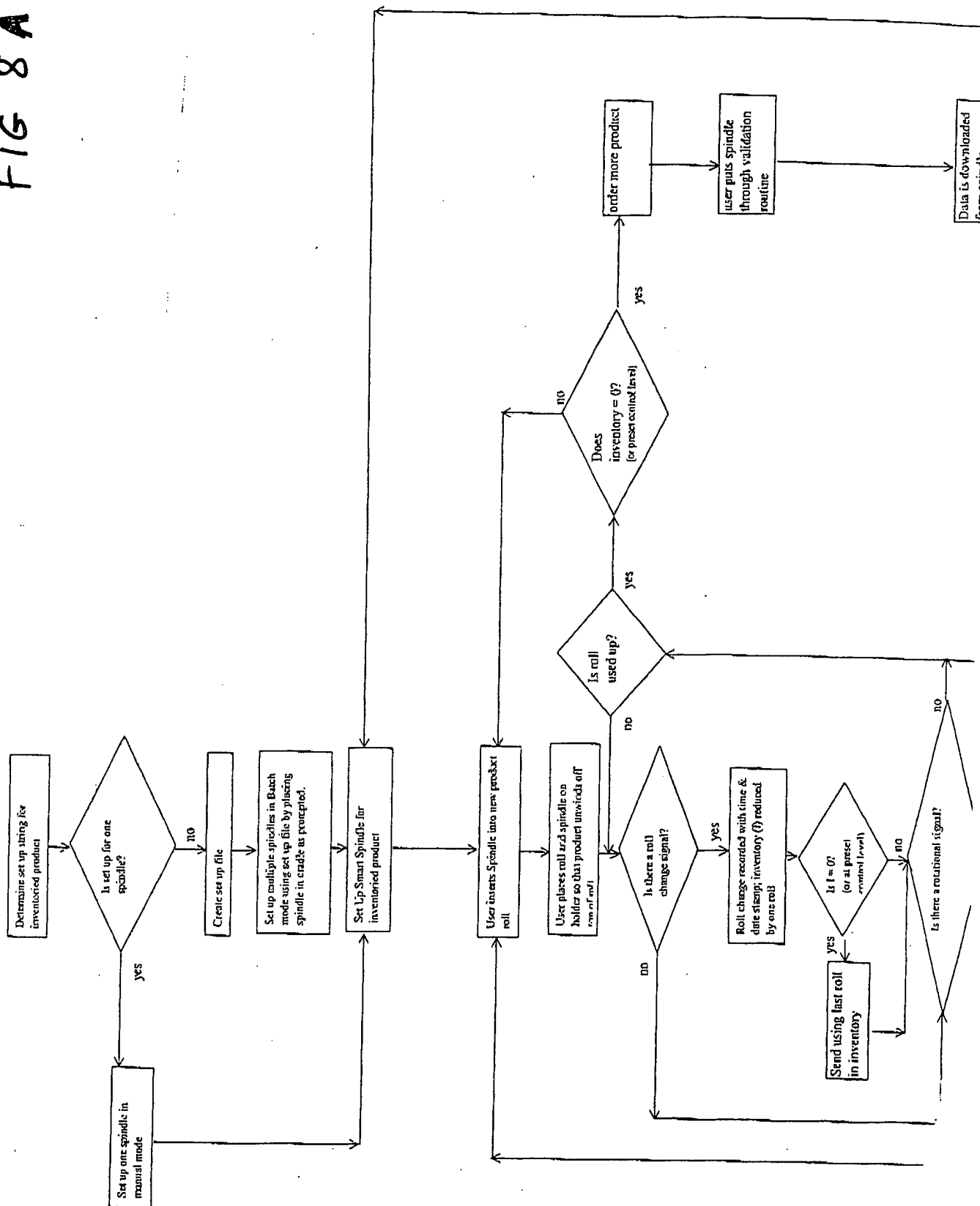


FIG 7B

Use of Smart Spindle to control an inventory in Consumer Home factory, retail store

FIG 8A



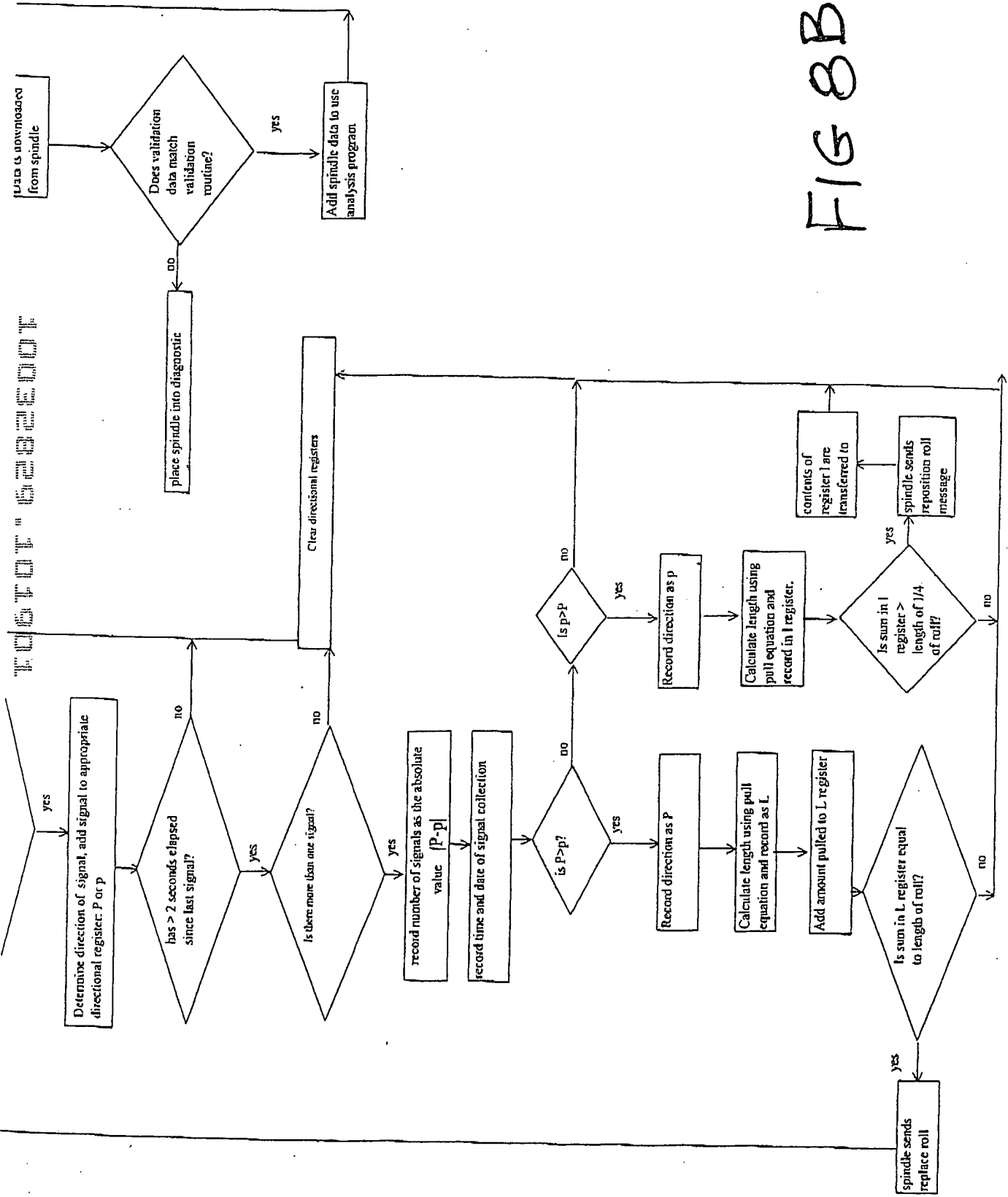


FIG 8B

10032829-101901

Spindle Manager

File Help

Setup Collect

File Setup

Setup File

Spindle ID

☐ Always Setup

Manual Setup

Spindle ID

Not downloaded 1.01

Fig. 9

Fig. 1003222E00T

Microsoft Excel - J:\AS - 003222E00T

File Edit View Insert Format Tools Data Window Help

Arial 11 100%

Ready

Microsoft Word - SS.PH Microsoft Outlook Microsoft Excel - L...

137 PM

	A	B
1	Employee	
2	R	110600
3	p	110500
4	p	110500
5	p	110600
6	p	110600
7	p	110600
8	p	110600
9	p	110600
10	p	110600
11	p	110800
12	p	110700
13	p	110700
14	p	110700
15	p	110700
16	p	110700
17	p	110700
18	p	110700
19	p	203518
20	p	11226
21	p	11236

Test Setup

Study #

Subject #

Bedroom #

Product ID

Spindle ID

Criterion for values (min)

Refresh

NUM

Ready

Start 2/Inbox Microsoft Outlook 137 PM

10032829 101901

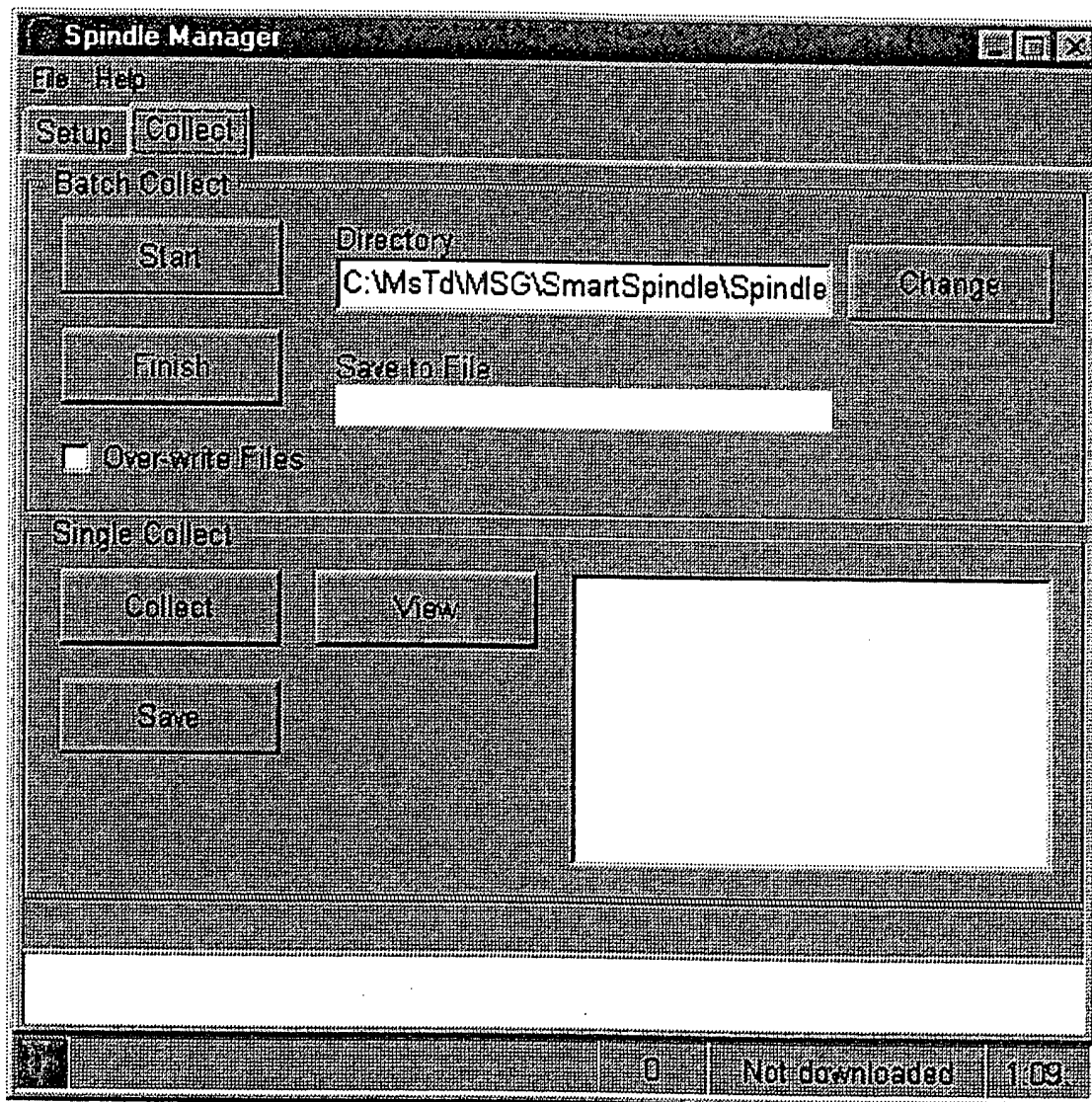


Fig. 11



Fig. 12

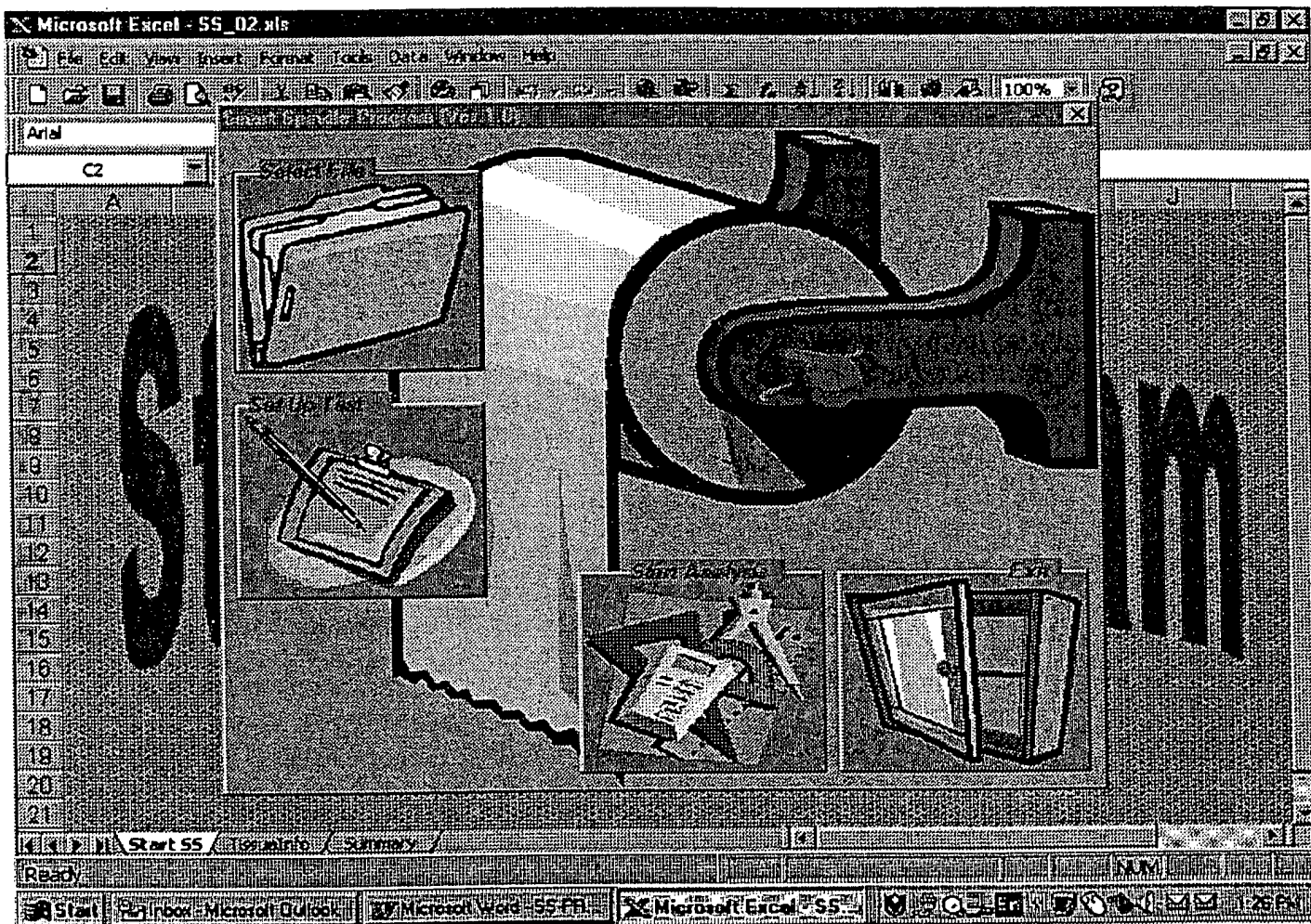


Fig. 13